LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**B.Sc.** DEGREE EXAMINATION – **ADV. ZOOLOGY & CHEMISTRY**

THIRD SEMESTER – **NOVEMBER 2012**

# PB 3206 - GENERAL MICROBIOLOGY

 Date : 09/11/2012 Dept. No. Max. : 100 Marks

 Time : 9:00 - 12:00

**Part – A**

**Answer the following, each within 50 words: (10 x 2 = 20)**

1. Distinguish between Gram positive and Gram negative bacteria.
2. Write a short note on Biotecton.
3. What are pili?
4. What is DHA? Write a note on DHA.
5. What are the chemical components of bacterial cell wall?
6. Give the types of nutrient media for microbial culture.
7. What are fimbriae?
8. Define gene expression.
9. Mention the pathogens of Citrus canker and rust of Wheat.
10. What are vaccines?

**Part – B**

**Answer the following, each within 500 words. Draw diagrams wherever necessary: (5 x 7 = 35)**

 11(a). Briefly describe the phenotypic classification system of bacteria.

(OR)

 (b). Enumerate the physical properties of viruses.

 12(a). Describe Carbon and Sulphur cycles.

(OR)

 (b). Briefly explain the biological treatment of sewage water.

 13(a). Give the structure and function of flagella in microbes.

 (OR)

 (b). What are pure cultures of microbes? Provide the methods of their maintenance.

 14(a). Briefly describe conjugation in bacteria.

 (OR)

 (b). Give a short account on little leaf disease of brinjal.

 15(a). Discuss the types of microbial food spoilage and the methods of food preservation.

 (OR)

 (b). Enumerate the microbial enzymes with their commercial applications.

**Part – C**

**Answer any three of the following, each within 1200 words. Draw diagrams wherever necessary: (3 x 15 = 45)**

 16. Elaborately discuss the importance of microalgae in changing the science fields.

17. Explain the physical and chemical processes of sewage water treatment.

 18. Describe microbial growth in batch culture. Add a note on the methods of its measurement.

 19. Write the pathogen, symptoms and control measures of Tobacco Mosaic Viral disease.

 20. Define transduction. Describe in detail specialized transduction.

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